FAIRCHILD SEMICONDUCTOR®

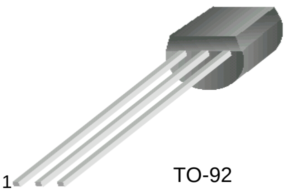
March 2008

SS8550

2W Output Amplifier of Portable Radios in Class B Push-pull Operation

Features

- Complimentary to SS8050
- Collector Current: I_C=1.5A
- Collector Power Dissipation: P_C=1W (T_C=25×C)



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TO-92

1. Emitter 2. Base 3. Collector

Absolute Maximum Ratings T_a=25×C unless otherwise noted

Symbol	Parameter	Ratings	Units
V_{CBO}	Collector-Base Voltage	-40	V
V_{CEO}	Collector-Emitter Voltage	-25	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current	-1.5	A
P_C	Collector Power Dissipation	1	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-65 ~ 150	°C

Electrical Characteristics T_a=25×C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	I_C= -100μA, I_E=0	-40			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C= -2mA, I_B=0	-25			V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E= -100μA, I_C=0	-6			V
I_{CBO}	Collector Cut-off Current	V_{CB}= -35V, I_E=0			-100	nA
I_{EBO}	Emitter Cut-off Current	V_{EB}= -6V, I_C=0			-100	nA
h_{FE1} h_{FE2} h_{FE3}	DC Current Gain	V_{CE}= -1V, I_C= -5mA V_{CE}= -1V, I_C= -100mA V_{CE}= -1V, I_C= -800mA	45 85 40	170 160 80	 300 	
V_{CE} (sat)	Collector-Emitter Saturation Voltage	I_C= -800mA, I_B= -80mA		-0.28	-0.5	V
V_{BE} (sat)	Base-Emitter Saturation Voltage	I_C= -800mA, I_B= -80mA		-0.98	-1.2	V
V_{BE} (on)	Base-Emitter on Voltage	V_{CE}= -1V, I_C= -10mA		-0.66	-1.0	V
C_{ob}	Output Capacitance	V_{CB}= -10V, I_E=0 f=1MHz		15		pF
f_T	Current Gain Bandwidth Product	V_{CE}= -10V, I_C= -50mA	100	200		MHz

h_{FE}Classification

Classification	B	C	D
h_{FE2}	85 ~ 160	120 ~ 200	160 ~ 300

Typical Performance Characteristics

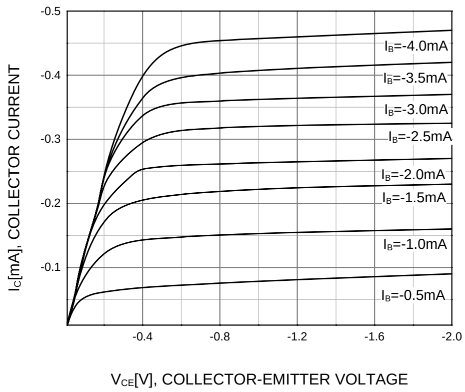


Figure 1. Static Characteristic

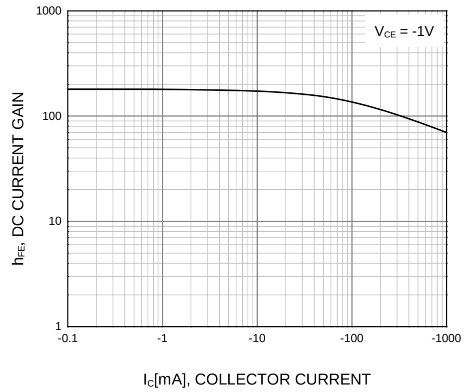


Figure 2. DC current Gain

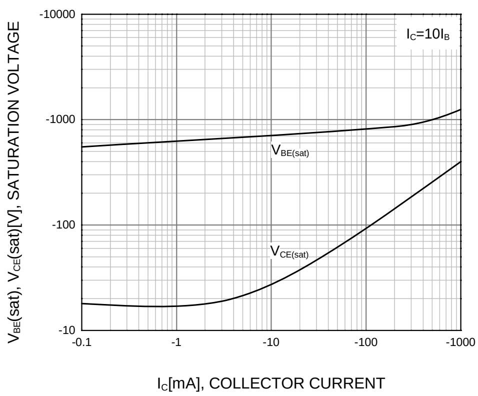


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

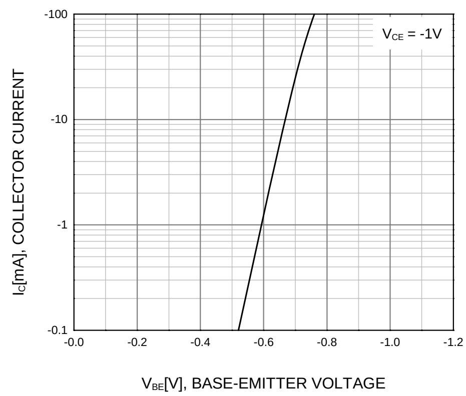


Figure 4. Base-Emitter On Voltage

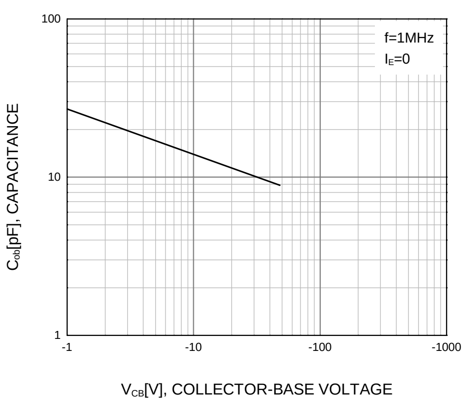


Figure 5. Collector Output Capacitance

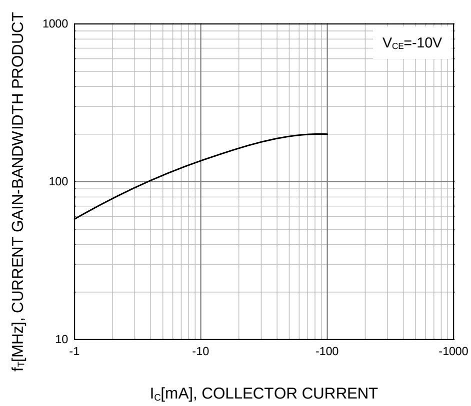


Figure 6. Current Gain Bandwidth Product

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